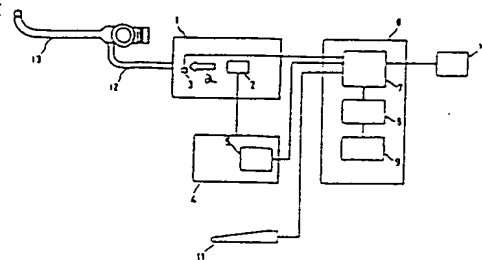


## (54) ENDOSCOPE DEVICE

(11) 1-223411 (A) (43) 6.9.1989 (19) JP  
 (21) Appl. No. 63-48592 (22) 3.3.1988  
 (71) TOSHIBA CORP (72) OSAMU TAKAMI  
 (51) Int. Cl. G02B23/26, A61B1/06

**PURPOSE:** To display a lamp lighting integrating time so as to be easily visible and to appropriately execute a lamp replacement by detecting the lighting of a light source lamp by a detecting part, integrating the lighting time and displaying it on a monitor screen.

**CONSTITUTION:** A light source lamp 2 of a xenon lamp, etc. of an endoscope is lighted by power supplied from a lamp lighting use power source part 4, and lighting of this lamp 2 is detected by a lighting detecting part 5, and its lighting signal is sent out to an operation processing part 7. In the processing part 7, only when the lighting signal is ON, a counting function is operated, a lamp lighting time is integrated, and an integrating use time is displayed on a monitor screen of a display part 10. Accordingly, the lamp lighting integrating time is displayed exactly and so as to be easily visible, and a lamp replacement can be managed appropriately.



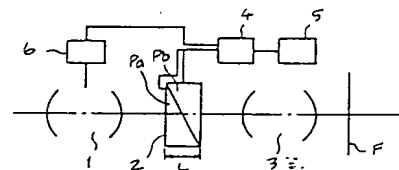
1: light source part, 3: optical sensor, 6: control part,  
 8: memory part, 9: backup use battery, 11: keyboard,  
 12: light guide, 13: endoscope scope. a: light

## (54) IMAGE STABILIZING OPTICAL SYSTEM

(11) 1-223413 (A) (43) 6.9.1989 (19) JP  
 (21) Appl. No. 63-50274 (22) 2.3.1988  
 (71) CANON INC (72) SHOICHI YAMAZAKI  
 (51) Int. Cl. G02B27/64

**PURPOSE:** To stabilize an image by simple constitution by rotating a correcting optical system for correcting an image blur in accordance with the camera shake quantity, and also, varying the thickness in accordance with a focal distance of a lens.

**CONSTITUTION:** A correcting optical system 2 for correcting an image blur, which is placed in a zooming part 1 consists of wedge-shaped optical elements (prisms) Pa, Pb, and brought to slide-contact by the boundary surface S. In such a state, when the camera blur quantity is detected by an acceleration detector 5, the correcting optical system 2 is rotated through an actuator 4. On the other hand, when the variation of a focal distance of a zoom lens is detected by a zoom magnification detector 6, the prisms Pa, Pb are slid through the actuator 4 so that thickness L is varied. In such a way, an image can be stabilized by simple constitution.



## (54) LED PACKAGING BODY FOR ELECTRONIC DEVICE

(11) 1-223414 (A) (43) 6.9.1989 (19) JP  
 (21) Appl. No. 63-50852 (22) 2.3.1988  
 (71) RICOH CO LTD (72) TOSHIKAZU YOSHIMIZU  
 (51) Int. Cl. G02F1/133, G09F9/33, H01L33/00//H01L31/12

**PURPOSE:** To reduce the output of a light source, and also, to miniaturize and thin a packaging body by providing an electrode on the reverse side of a substrate on which an electronic device is formed, and attaching an LED chip to this electrode as one body with the substrate.

**CONSTITUTION:** On the surface side of a substrate 1 made of transparent glass, liquid crystal elements 2 such as a liquid crystal display and a liquid crystal shutter, etc. are formed. On the other hand, on the reverse side of the substrate 1, an electrode 8 is provided, and to this electrode, an LED chip 7 is connected by a bump 10 and a solder bump 11 by a face-down bonding method. An emitted light 12 of the LED chip 7 transmits through the substrate 1 from the reverse side of the substrate 1 and irradiates the liquid crystal elements 2. Accordingly, by shortening a distance between the LED chip 7 being in irradiation light source and the surface to be irradiated by the beam the output of the light source is reduced, and also, since the chip 7 is provided as one body on the reverse side of the substrate, a packaging body can be miniaturized and thinned.

